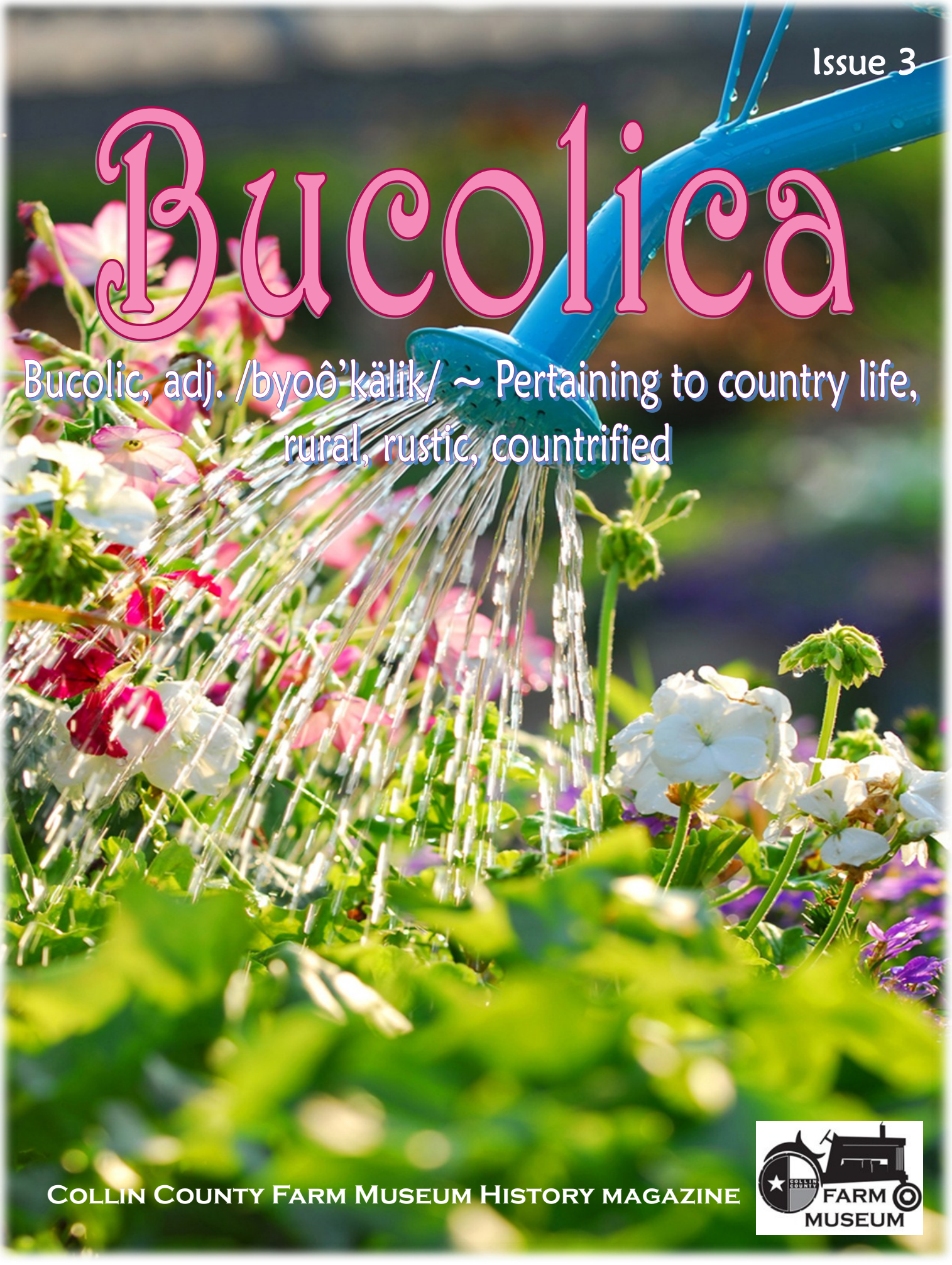


Issue 3

Bucolica

Bucolic, adj. /byoô'kälik/ ~ Pertaining to country life, rural, rustic, countrified

Collin County Farm Museum History magazine

FARM MUSEUM

Water...

Color is the visual perceptual property corresponding in humans to the categories called red, green, blue, and others. Color categories and physical specifications of color are also associated with objects, materials, light sources, etc., based on their physical properties.

Are you interested in learning to drive historic tractors! Collin County Farm Museum offers **Tractor Training Classes** on Saturday, July 6th & 13th 2012. Registration is now open. Visit www.myersinfo.com and click "Collin County Farm Museum" or view page 12.

We loan artifacts and exhibits to schools, libraries & special events. Our newest exhibit is "Rural Sound" with wonderful parlor organ, phonographs, and radios. If you are interested in displaying a museum artifact or exhibit, contact us at: ccfm@collincountytx.gov

Contents

Museum Hours of Operation:

Fall & Spring
Friday & Saturday
10:00 AM ~ 3:00 PM

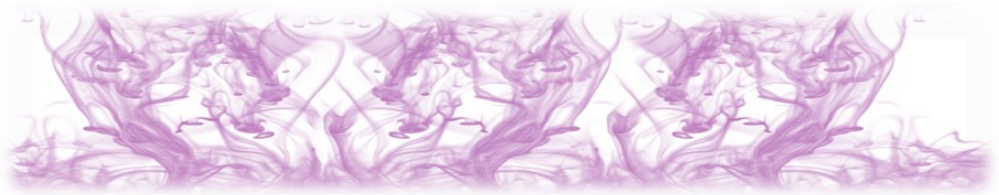
Summer & Winter
By Appointment Only!

Like

www.facebook.com/pages/Collin-County-Farm-Museum

From the Museum Coordinator

Last year the Collin County Farm Museum received a wonderful donation from Barbara Boyd. The collection was Roland Boyd's Soil Conservation files, books, report, and photographs. This collection was the inspiration for the 3rd issue of Bucolica. It's all about WATER.



I've always known that water was important. You have the basics drilled into you from elementary school… water covers 70% of the Earth's surface and the human body is made up of 60% water… and plants need water to grow.

As I've gotten to know many of the local farmers in Collin County, I've come to realize exactly how important water is to our community. We've witnessed some sever drought the past two summers. Farmers and ranchers had to scramble to keep operations going.

However, these are not issues that are only relevant to the present. Rather these issues have dealt their cards to farmers for centuries if not a millennia… and we've devised different methods for addressing these issues of droughts and floods.

This quarter's issue features a variety of questions asked either in the museum during tours, at an event or on Facebook. Other articles were composed from the Roland Boyd collection.

I hope you enjoy the water lesson of the past poured for you … drink up!

" 'noon watering, 1920s"
Photograph Donated by Donald Fisher

Jennifer C. Rogers, Museum Coordinator
Collin County Farm Museum
7117 County Road 166
McKinney, TX 75071
972-548-4792
ccfm@collincountytx.gov

Who is Affected by Drought?

"Drought" is an extended period of months or years of deficient water supply on the surface or below ground. This has a substantial impact on the ecosystem and agriculture of a region, such as: low crop yields, famine & malnutrition, habitat damage, dehydration, mass migration, shortages, wildfires and dust storms.

"And then the dispossessed were drawn west- from Kansas, Oklahoma, Texas, New Mexico; from Nevada and Arkansas, families, tribes, dusted out, tractored out. Car-loads, caravans, homeless and hungry; twenty thousand and fifty thousand and a hundred thousand and two hundred thousand. They streamed over the mountains, hungry and restless - restless as ants, scurrying to find work to do - to lift, to push, to pull, to pick, to cut - anything, any burden to bear, for food. The kids are hungry. We got no place to live. Like ants scurrying for work, for food, and most of all for land."
~ The Grapes of Wrath written by John Steinbeck

Answer: Farmers...

The real answer is "everyone" but farmers are usually the ones who feel the impact of droughts first and hardest. Today, farmers still compare all droughts to the worst drought in United States history, the **Dust Bowl**.

The widespread plowing of the plains began in the early 1900s destroying the original short-grass prairie, replacing it with wheat fields. This was also a practice used in the Blackland Prairie of North Texas.

The collapse of wheat prices after World War I (1918) pushed farmers to further expand acreage devoted to wheat in a futile attempt to increase their income. However, passing of the Hawley–Smoot Tariff Act of 1930 reduced the cost of imported foreign goods and crops. This led to retaliatory tariffs which greatly reduced the export of American wheat, driving wheat prices to historic lows and forcing farmers throughout the Great Plains into bankruptcy. Prices fell from $70/ton during World War I to $35/ton in 1929 to $7/ton in 1931.

Combined with a searing drought, which began in the early 1920s, the wheat crops and farmers were doomed. By the 1930s the wheat failed to sprout, leaving bare, plowed fields at the mercy of the strong winds sweeping across bare prairies.

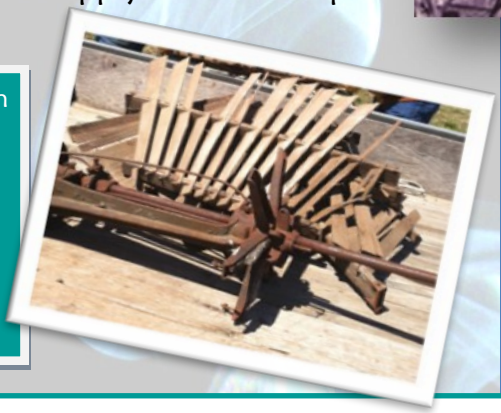
Vast dust storms followed, destroying farms and driving 50,000 people a month from the land at the height of the Dust Bowl. More than 300,000 rural people left the prairies for California. Their story was told eloquently by John Steinbeck in Grapes of Wrath published in 1939.

"Water Wagon" at the Mack Fisher Farm in Collin County (c.1920) Photograph donated by Donald Fisher

Though much of the Dust Bowl drought in Texas was concentrated around in the northwest, Collin County had its own experiences (not to the scale of West Texas). Collin County farmers were able to pull water from aquifers or groundwater using windmills. (See photograph to left.)

The aquifer supplying water to Collin County is called the Woodbine Aquifer. Farmers today continue to use this aquifer to supply water to crops and cattle.

This past April, Gene Dunham donated a wooden windmill that the museum will be restoring starting in July. If you're interested in helping, contact: ccfm@collincountytx.gov



On August 14, 1991, Sam Roach donated a 30' metal windmill (c. 1930s) from the Roach Farm north of Frisco. This windmill provided water from a "shallow well" (25-30' deep) and was made by the Axtell Company in Fort Worth, Texas. ~ The Windmill is on display at the Farm Museum

What Mixes Water & Mechanics?

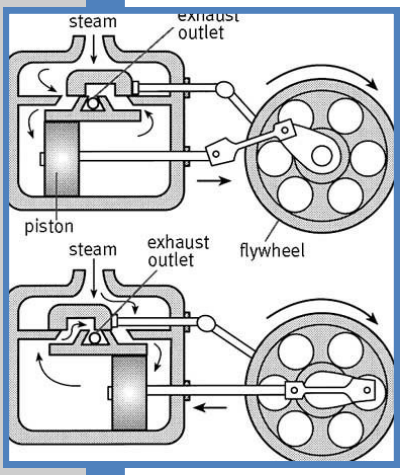
Answer: The Steam Engine...

The steam engine "drastically changed the settlement of America," stated Jeff Phelps, a restoration volunteer at the Collin County Farm Museum. It also improved the efficiency of farmers, he went on to say. They "were able to order a plow [from manufacturers] in the North or Midwest and have it shipped by locomotive" which were predominately powered by steam until the 1950s.

Steam engines not only powered the settlement of America and the Industrial Revolution... it also powered a revolution in agriculture in the form of a **traction engine**.

A traction engine is a self-propelled or self-moving steam engine used to move heavy loads on the road or provide power in the fields.

"Soon shall thy arm, UNCONQUER'D STEAM! afar; Drag the slow barge, or drive the rapid car; Or on wide-waving wings expanded bear; The flying-chariot through the fields of air." ~excerpt from "Botanic Garden" (1781) written by Erasmus Darwin



A steam engine consists of 6 main parts: a boiler, safety valve, cylinder, steam reservoir, piston, and a drive or flywheel.

A steam engine needs steam to go. Fuel (usually coal) is fed into a fire box and burned at 1400°C. The heat turns water stored in the boiler into steam. The steam passes through the boil-

er to the steam reservoir through pipes. A slide valve in the piston opens and shuts two steam ports, alternately. The piston is connected to a drive wheel.

When the steam enters into the slide valve, it pushes the piston to the right and turns the wheel. The left valve closes and the right valve is opened letting steam on the other side of the piston.

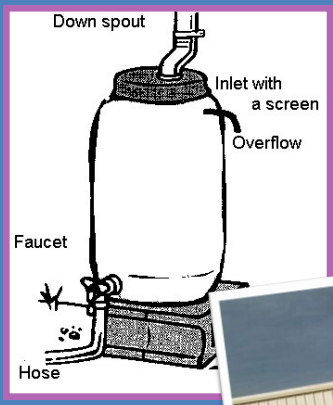
Far Right: Steam Traction Engine with belt on flywheel; Left: Belt running from traction engine to threshing machine for wheat harvest. Photographs donated by Helen Hall

Although traction engines were large, robust and powerful, they were also hard to manoeuver. Nevertheless, they revolutionized farming in a time when the only other alternative mover was the draft horse.

When was the Rain Barrel Invented?

Playmate
(c. 1910)

"See, see my playmate,
Come out and play with me
And bring your dollies three.
Climb up my apple tree
Holler down my rain barrel,
Slide down my cellar door
And we'll be jolly friends, forevermore."



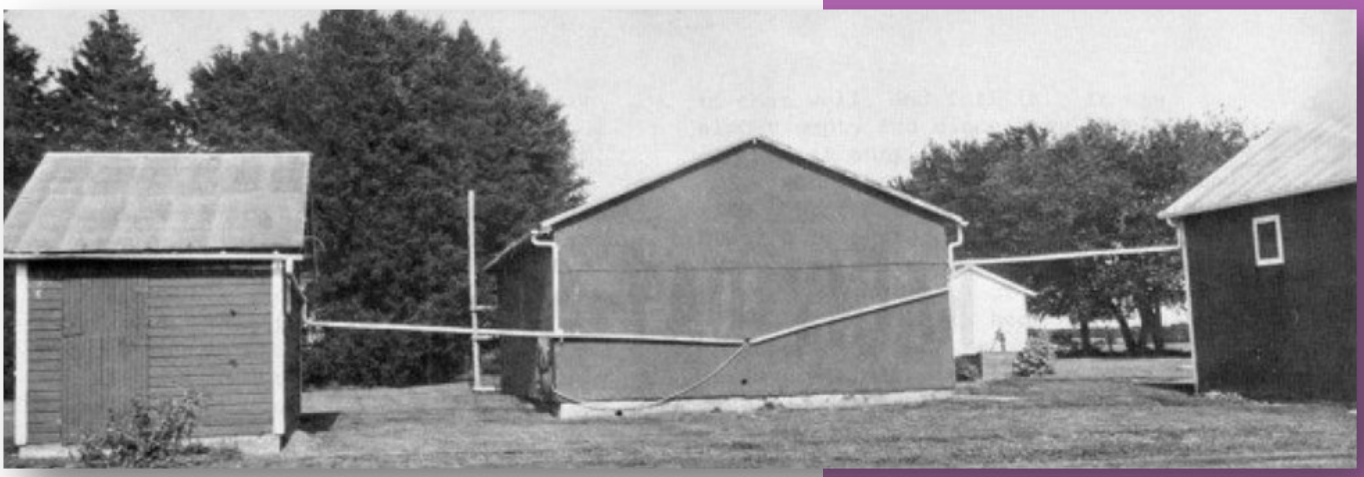
Answer: Not Sure?...

When this question was asked, I admit, I did not expect to find much information about the history of rain barrels… but I did get a few surprises.

Although there is not sufficient history recorded about rain barrels or rain harvesting systems, I can tell you that rain harvest systems have been around since early human history. I spent quite some time researching and asking questions, and exploring photographs. As a result, I uncovered a plethora of information about different rain harvest systems, such as cisterns, tanks and even lakes that were recorded as far back as 300 B.C. in farming communities of Baluchistan (modern day Pakistan, Afghanistan, and Iran).

The rain harvest system connected to the Collin County Farm Museum.

However, this question specifies "rain barrels" which I've defined as a rain harvest system which uses gutters to direct rain from the roof to barrel or tank. This invention I can safely say has been around since the advent of photography. Many of the photographs consulted showed farms and rural households using this form of rain harvesting.



Above: Shows eave troughs installed on the buildings to capture rainwater and direct to a cistern in the middle barn. - Barn in Springfield-Green County, MO (c. 1910)

Left: Two women washing clothes - notice the rain barrel to the left and the gutter spout directed towards it. (c. 1912)

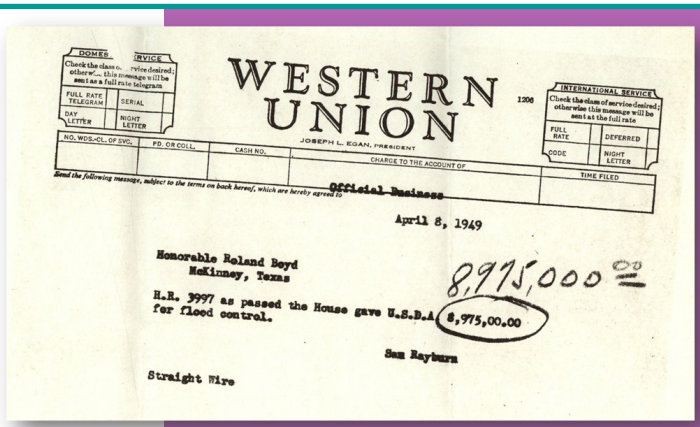
"Captured rainwater is free of salts and other harmful minerals and does not have to be treated, which makes it ideal for gardens. A 55-gallon rain barrel can be filled up with as little as a 0.25 inch of rainfall on an average size roof. By using captured rainwater for watering landscapes, homeowners can reduce their demand for treated water from the city."
~ Abby Owens, Water Education Coordinator, City of Plano

Where? ... is Lake Lavon

Answer: in Wylie, Texas...

But the real question is, "Is it a lake?" Today, Lake Lavon is known as a recreational lake for fishing, camping and boating. However, the Collin County Farm Museum received a donation in January of 2012 of a large collection of photographs and boxes of papers from Roland Boyd about Lake Lavon, and it is actually a reservoir.

Much of the collection references the water con-



WESTERN UNION

JOSEPH L. EGAN, PRESIDENT

Official Business

April 8, 1949

Honorable Roland Boyd
McKinney, Texas

H.R. 3997 as passed the House gave U.S.D.A. $8,975,000.00 for flood control.

Sam Rayburn

Straight Wire

Copy of Western Union telegraph from Sam Rayburn to Roland Boyd authorizing flood control money.

The Roland Boyd Collection is quite extensive and it will take time to digitize the entire collection. One of the issues, is the size of the photographs. Most are 18"x24" and some are larger. If you are interested in helping digitize and organize or access for research. Please contact: ccfm@collincountytx.gov.

servation programs of the 1940s and 1950s, which include the creation of Lake Lavon, formerly known as Lavon Reservoir.

Construction for Lavon Reservoir was started in January 1948 and completed in early 1953. Lavon Lake was designed for flood control, water conservation storage, and recreational use. Although, construction of the dam assisted in preventing seasonal flooding of rich bottomland in southeastern Collin County, pre-existing farms in the vicinity of Lake Lavon were bought out and flooded to create the lake-reservoir.

The Collin County Farm Museum is very pleased to have the Roland Boyd Collection. The photographs, committee reports and water plans donated by Mrs. Boyd clearly outlines the need and development of Lavon Reservoir. The plans also exhibit a keen interest in stimulating land development with lakeside parks and marinas; thus transforming much of the farm and ranch communities of Collin County. ~ Sources: *A History of Collin County* (1958) & Roland Boyd Collection.

Why Dye with Water?

"The colors of quilts are heavily linked to nature as the dye products came from plant roots, leaves and/or blossoms as well as insects and sea urchins. Rhubarb and Goldenrod produced shades of yellow and orange. Madder root provided various shades of red and Indigo gave a vibrant dark blue. Experimentation with mixing colors resulted in the availability of additional colors."

~ Bucolica, Issue 2, article "Color of Quilts" by Joan Wilson.

Answer: There are several reasons...

I suspect this question came about as a response to last issue's article concerning quilt colors. There was a brief statement about the development of color dyes from nature. However, dyes are mixed with water and the question is "Why?"

Water or H_2O is a very interesting chemical fluid. There are many properties of water which make it very versatile. For instance, water has the ability to dissolve a large variety of chemical substances. It can dissolve salts (ionic compounds), alcohols and organic acids. These are components of plant, animal and insect mater used to create dye powders. By placing these powders in water, they are dissolved allowing the dye to spread over a greater volume.

Additionally, water is 'magnetic' to other water molecules since the oxygen end of a water molecule has a negative charge (-) and the hydrogen end has a positive charge (+). Thus the ends attract other water molecules. The magnetism of water assist the saturation of permeable objects, such as fibers. Therefore, dyes in water saturate cotton, wool and/or paper better. Not only is water magnetic to other water molecules, but it can also bond with other molecules easily, such as the dyes and the object being dyed.

***

"Texas Cotton Mill" - "Oxheme S.E. corner of McKinney" - "Once the largest payroll in McKinney, operating with 3 shifts of workers daily. Building badly damaged in May 3, 1948 tornado, but was restored." ~ from the North Texas History Center collection

Collin County had a prolific cotton industry during the late 1800s and the early 1900s with several gins and textile mills in operation until the 1960s and 1980s. Collin County also has a long history in the sheep and wool industry. More wool comes from the state of Texas than any other state in the United States of America.

To the left is a sheep sheering rig used by the Stone family. This photograph was donated by Pepe & Eugene Stone.

***

The Collin County Farm Museum also has a sheep sheering rig that was donated by Ms. Gilda Garza. Her father, Raymond Garcia, used the rig on his farm. Incidentally, the museum recently recovered many of its oral history tapes and video tapes. One tape is of Raymond Garcia.

***

If you are interested in helping the museum digitize and transcribe its oral history collection, please contact:

ccfm@collincountytx.gov

How does Water Affect Soil Erosion?

Answer: Rainfall

Other than drought, the lack of water, farmers are also concerned about water erosion. Roland Boyd and the Soil Conservation Committee of Collin County were particularly concerned about water and soil erosion.

Rainspalsh ~ Rain moves unprotected soil directly. When rain falls with sufficient intensity, it hits the bare soils and the kinetic energy detaches and moves soil particles a short distance. Now multiply that movement by the many millions of raindrops in a period of time.

Gully Erosion ~ Rainfall moves unprotected soil indirectly with runoffs into rills (small channels) or gullies (large channels) and flooding. This is the dominate type of erosion on farms. When the ground is saturated or water is falling faster than can be absorbed by the ground, runoff or overland flow occurs. When the runoff moves downhill (gravity in action) in greater quantity and at a increased rate, it displaces the soil eroding flow paths of rills and gullies.

Why is this a problem?

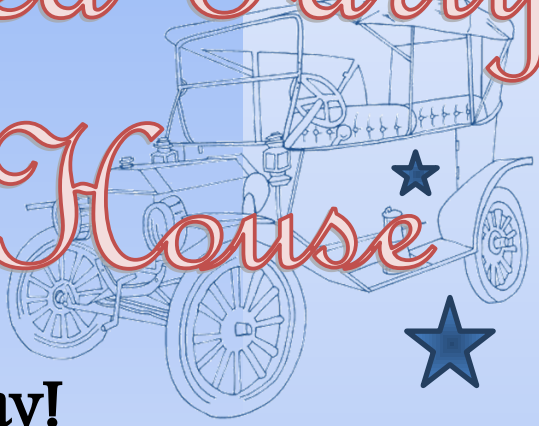
Farmers began addressing the issue of soil erosion in Collin County shortly after the advent of the Dust Bowl. The problem was 'unprotected' soil. The common massive tilling or plowing practice of the early 20th century brought about dramatic changes in the environment and the soil. As a result, farmers were losing the very nutritious soil they needed to grow crops. Hence the creation of Soil Conservation Committees throughout Texas and the United States.

***

Thanks to Mrs. Barbara Boyd for donating the Roland Boyd collection which inspired this issue's topic of "Water."

For more information about soil conservation and other topics discussed in this issue's history magazine, please contact: ccfm@collincountytx.gov

Model Tea Party & Open House



Celebrate the month of May!

May 18, 2013 from 10:00 am to 2:00 pm

Admission is FREE!

Motor over to the County Farm Museum

@Myers Park & Event Center on May 20, 2013

7117 County Road 166 * McKinney, TX 75071

For more information call 972-548-4792 or email ccfm@collincountytx.gov

Thank you to all the people who submitted their questions and opinions to this quarter's issue. The theme of the next issue is "Heat."

I know there are many creative people in and around Collin County and I encourage you to submit questions, stories, essays and photographs for the quarterly issues and you will receive recognition for your work. Please submit your questions, essays and/or photographs to: ccfm@collincountytx.gov

Deadline	Theme	Suggestions
July 12th	Heat	Blacksmith, Cooking, Flames/ Fires, Summer Harvest…
October 12th	Home	Memories, Architecture, Traditions, Interior Design…

Only electronic submissions are accepted.

Tractor Training Class

July 6 & 13, 2013 from 9:00 am to 12:30 pm * Fee $10.00/person

*We encourage adult and child participation with this program; however, everyone must be a **minimum of 47" tall** to reach the tractor pedals. This is a great activity for parents & grandparents with their children or grandchildren.

Learn about historic tractors & how to start and drive them!

L1: Allis Chalmers
L2: Oliver
L3: John Deere A
L4: Farmall
L5: Hart Parr

Because you will be rotating through a course with everyone starting at Level 1, please choose a day & start time:

July 6, 2013
- ☐ 9:00 am
- ☐ 9:45 am
- ☐ 10:30 am
- ☐ 11:15 am

July 13, 2013
- ☐ 9:00 am
- ☐ 9:45 am
- ☐ 10:30 am
- ☐ 11:15 am

Register: 972-548-4792 ccfm@collincountytx.gov or visit www.co.collin.tx.us/parks/myers/farm_museum.jsp

***Fill out form below and Waiver Agreement.**

Youth's Name: Youth's Height:

Adult's Name: Phone Number(s):

Address: City/State: Zip Code:

Email Address: Does this youth have an adult partner?

Yes No